

WHAT IS CLAIMED IS:

1. A stereomicroscope comprising:

an illumination unit for illuminating a specimen with the light;

5 a specimen setting board; and

a fitting member for fitting an objective lens, said illumination unit, said specimen setting board and said fitting member being disposed in sequence on an optical axis,

10 wherein one of a predetermined a low-magnification objective lens and a higher-magnification objective lens than said low-magnification objective lens can be selected and fitted as said objective lens to said fitting member,

15 said illumination unit includes a light source, a shield element for cutting off partially light beam emitted from said light source, first and second condenser lenses for converging the light beam passing said shield element on the specimen, and a mechanism for selecting one of said first and second condenser lenses and disposing said selected lens on the optical axis,

20 said first condenser lens exhibits an optical characteristic of setting a position conjugate to an entrance pupil of said low-magnification objective lens fitted to said fitting member in a position of said shield element or in the vicinity of said shield element, and  
25 said second condenser lens exhibits an optical

characteristic of setting a position conjugate to an entrance pupil of said high-magnification objective lens fitted to said fitting member in a position of said shield element or in the vicinity of said shield element.

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2. A stereomicroscope comprising:

an illumination unit for illuminating a specimen with the light;

a specimen setting board; and

10 a fitting member for fitting an objective lens, said illumination unit, said specimen setting board and said fitting member being disposed in sequence on an optical axis,

15 wherein one of a predetermined a low-magnification objective lens and a higher-magnification objective lens than said low-magnification objective lens can be selected and fitted as said objective lens to said fitting member,

20 said illumination unit includes a light source, a shield element for cutting off partially light beam emitted from said light source, a first condenser lens for converging the light beam passing said shield element on the specimen, and a mechanism for moving said first condenser lens on and off the optical axis,

25 said shield element is disposed in a position of an entrance pupil or in the vicinity of this entrance pupil of said high-magnification objective lens as said

objective lens fitted to said fitting member,  
 said first condenser lens exhibits an optical  
 characteristic of setting a position conjugate to an  
 entrance pupil of said low-magnification objective lens  
 5 fitted to said fitting member in a position of said shield  
 element or in the vicinity of said shield element.

3. A stereomicroscope comprising:  
 an illumination unit for illuminating a specimen  
 10 with the light;  
 a specimen setting board;  
 a fitting member for fitting an objective lens; and  
 a zoom lens, said illumination unit, said specimen  
 setting board, said fitting member and said zoom lens  
 15 being disposed in sequence on a optical axis,  
 wherein said zoom lens includes a movable lens  
 movable in a direction of the optical axis in order to  
 change a magnification,

said illumination unit includes a light source, and  
 20 a shield element for cutting off partially light beam  
 emitted from said light source, and

said shield element is disposed in a position  
 conjugate to the entrance pupil or in the vicinity of this  
 entrance pupil of said objective lens when said zoom lens  
 25 exhibits the lowest magnification.

4. A stereomicroscope according to claim 1, wherein

y. Q. said illumination unit includes a <sup>collector</sup> ~~third condenser~~ lens  
 Dec. 15, 2000 disposed between said light source and said shield element,  
 and  
 y. Q. <sup>collector</sup> ~~third condenser~~ lens forms an image of said  
 Dec. 15, 2000 5 light source in a position of said shield element.

5. A stereomicroscope according to claim 1, wherein  
 a reflecting element for bending the optical axis is  
 disposed in the position of said shield element of said  
 10 illumination unit, and

said shield element has a cover member for covering  
 a part of a reflecting surface of said reflecting element.

6. A stereomicroscope according to claim 5, wherein  
 15 said shield element includes a mechanism for increasing  
 and decreasing a covered area of the reflecting surface  
 by feeding out and drawing in said cover member above the  
 reflective surface in order to adjust a quantity of the  
 light beam to be cut off.

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7. A stereomicroscope according to claim 4, wherein  
 a reflecting element for bending the optical axis is  
 disposed between said shield element and said first or  
 second condenser lens.

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8. A stereomicroscope according to claim 4, wherein  
 said shield element includes a stretchable light shield

member and a mechanism for stretching and contracting said light shield member.

9. A stereomicroscope according to claim 1, wherein  
 5 a converging angle of the light beam converged by said second condenser lens is larger than an aperture angle of said high-magnification objective lens.

10. A stereomicroscope according to claim 5, wherein  
 10 a reflectance of a front end portion of said cover member is larger than reflectances of other portions thereof.